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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,779	03/25/2004	Jae-Shik Kim	678-1193 (P11061)	5885

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EXAMINER

JACKSON, ANDRE L

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,779

Applicant(s)

KIM, JAE-SHIK

Examiner

Andre' L. Jackson

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 25, 27, 28 and 30 is/are rejected.
- 7) ☒ Claim(s) 24, 26 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Applicant's Amendment

Applicant's amendment filed August 12, 2005 perfecting applicant's foreign priority papers (#2003-22098) to overcome the rejection in the previous Office Action of May 19, 2005 has been acknowledged since a certified translation of the foreign papers has been made of record in accordance with 37 CFR 1.55. Accordingly, the previous rejection in view of #2004/0141287 to Kim et al is respectfully withdrawn. However, upon subsequent review of the prior art, newly cited reference #2005/0198779 to Jung et al has been discovered and applied to meet the limitations of applicant's claims and an explanation of the new grounds of rejection appears below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by USPAP 2005/0198779 to Jung et al. Jung et al (Figs. 40 and 41) discloses a rotary hinge mechanism useable with a portable wireless terminal comprising;

a first rotation axis for opening and closing a folder (200) with respect to a terminal body (100) and a second rotation axis extending perpendicular to the first rotation axis and adapted to rotate relative to the first rotation axis, the hinge mechanism being adapted to rotate the folder

Art Unit: 3677

about the second rotation axis in a state wherein the folder and the terminal body are opened; a first hinge housing (7100) coupled to the terminal body to rotate about the first rotation axis, the first hinge housing being formed with a fixing portion (7200) at its inner peripheral surface defining a fixing groove surrounded by ribs (Fig. 41) and an opening (bottom surface of first hinge housing) adapted to expose the fixing portion in a direction of the second rotation axis; a main shaft (7210) provided at one end with a fixing end having a shape corresponding to the fixing portion, the main shaft extending in the direction of the second rotation axis and being adapted to protrude outwardly through the opening of the first hinge housing at its other end thereof; and a second hinge housing (7220) rotatably coupled to the other end of the main shaft protruding outwardly from the first hinge housing and adapted to rotate about the second rotation axis, the second hinge housing being fixed to the folder.

As to claims 2 and 11, the rotary hinge mechanism's main shaft is adapted to penetrate from a lower end surface of the second hinge housing to an upper end surface thereof, thereby causing the one end to be protruded from the upper end surface of the second hinge housing, the protruding end of the main shaft being fastened with an e-ring (7250). The second hinge housing further comprises fastening arms (7222) extended outwardly from both sides thereof, the fastening arms being formed with fastening holes (7225) at their opposite ends, respectively.

As to claims 3-6, 8, 9 and 16-20, further the rotary hinge mechanism including a perforated hole (hollow bore) formed at a lower end surface of the second hinge housing, a shaft cam (7212) provided at the other end of the main shaft and adapted to be inserted through the perforated hole, thereby being positioned within the second hinge housing, the shaft cam being formed at its outer peripheral surface with at least one pair of stopper recesses (7211) arranged

Art Unit: 3677

on opposite sides of the shaft cam, respectively; and stopper cams (7230) formed at their respective one ends with stopper projections (7231) having a shape corresponding to the stopper recesses, respectively, the stopper cams being adapted to stop a rotation of the second hinge housing by receiving an elastic force (7240) within the second hinge housing at a position that the stopper recesses and stopper projections come into close contact with each other, respectively, the stopper cams linearly reciprocating within the second hinge housing in accordance with the rotation of the second hinge housing.

As to claims 7 and 10, the second hinge housing is formed with a sliding guide (7223) extending longitudinally at its inner peripheral surface, and each stopper cam is formed at its outer peripheral surface with a guide protrusion (square base at 7230) corresponding to the sliding guide, whereby the sliding guide and guide protrusion are adapted to guide linear reciprocating movements of the stopper cam.

As to claim 12, a flexible printed circuit or wires protrudes from an interior space of the folder and extends longitudinally at one side of the main shaft, thereby entering into the first hinge housing through the opening (7110) thereof, and the flexible printed circuit or wires is looped about the main shaft within the first hinge housing and drawn from one side end of the first hinge housing connecting the folder and terminal body [0366].

As to claim 14, additionally, a folder opening/closing hinge module (7300) is received within one side of the first hinge housing, the hinge module providing a rotating force to cause the folder to be opened if the folder is opened away from the terminal body exceeding a predetermined angle, and to cause the folder to be closed if the folder is away from the terminal body below the predetermined angle.

Claims 21-23, 25, 27, 28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by USPAP 2005/0198779 to Jung et al. Jung et al (Figs. 36-39) discloses a rotary hinge mechanism useable with a portable wireless terminal comprising;

a first rotation axis for opening and closing a folder (200) with respect to a terminal body (100) and a second rotation axis extending perpendicular to the first rotation axis and adapted to rotate relative to the first rotation axis, the hinge mechanism being adapted to rotate the folder about the second rotation axis in a state wherein the folder and terminal body are opened; a first hinge housing (6100) coupled to the terminal body to rotate about the first rotation axis, the first hinge housing being formed with a fixing groove (6111) surrounded by ribs (inner sidewalls) extended to a certain height at its inner peripheral surface, and an opening (6110) adapted to expose the fixing groove in a direction of the second rotation axis; a main shaft (6250) provided at one end with a fixing end (6252) having a shape corresponding to that of the fixing groove, the main shaft extending in the direction of the second rotation axis and adapted to protrude outwardly through the opening of the first hinge housing at the other end thereof; and a second hinge housing (6210) rotatably coupled to the other end of the main shaft protruding outwardly from the first hinge housing and adapted to rotate about the second rotation axis, the second hinge housing being fixed to the folder.

As to claims 22 and 23, the first hinge housing is further formed with a first guide rail (6112) extending in the direction of the second rotation axis at one side of the fixing groove, and a guide groove (concave openings) formed along the direction of the second rotation axis at one surface of the guide rail facing the fixing groove; and the main shaft is further formed at its one side with a second guide rail (6251) extended in the direction of the second rotation axis and

Art Unit: 3677

adapted to be inserted into the guide groove (Fig. 37). Further, the first guide rail defines a slit or hole (6113), having a certain width, between its one side and an inner sidewall of the first hinge housing to engage a corresponding projection (6253) of the fixing end.

As to claims 25, 27, 28 and 30, the hinge mechanism includes a shaft cam (6222, 6232) formed at its outer peripheral surface positioned within the second hinge housing with at least two pairs of stopper surfaces (6224) arranged on opposite sides of the shaft cam, respectively; and stopper cams formed at their respective one ends with stopper recesses (6214) having a shape corresponding to corners formed by adjacent stopper surfaces, respectively, the stopper cams being adapted to stop a rotation of the second hinge housing by receiving a certain elastic force by coil spring (6240) within the second hinge housing at a position that the corners of the shaft cam and the stopper recesses come into close contact with each other, respectively, the stopper cams linearly reciprocating within the second hinge housing in accordance with the rotation of the second hinge housing, wherein the main shaft penetrates the second hinge housing.

Allowable Subject Matter

Claims 24, 26, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3677

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In particular, Kang et al discloses a rotary hinge system including first and second hinge housings, hinge modules and a hinge shaft member affording rotational movement about perpendicular axes, Kang et al may be used singly or in combination with Jung et al to anticipate applicant's claims.

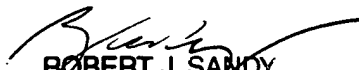
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' L. Jackson whose telephone number is (571) 272-7067. The examiner can normally be reached on Mon. - Fri. (9:30 am - 6 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALJ

André L. Jackson
Patent Examiner
AU 3677


ROBERT J. SANDY
PRIMARY EXAMINER